



## Application for works approval

Division 3 Part V of the *Environmental Protection Act 1986*

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<b>Works Approval Number</b>	W6587/2021/1
<b>Applicant</b>	Holcim (Australia) Pty Ltd
<b>ACN</b>	099 737 297
<b>File number</b>	DER2021/000299
<b>Premises</b>	Holcim Welshpool Concrete Batching Plant 12 Cohn Street CARLISLE WA 6101  Legal description Lot 310 on Deposited Plan 34532
<b>Date of report</b>	18 January 2022
<b>Status of report</b>	Final

## 1. Decision summary

This decision report documents the assessment of potential risks to the environment and public health from emissions and discharges during the construction and operation of the premises. As a result of this assessment, works approval W6587/2021/1 has been granted.

## 2. Scope of assessment

### 2.1 Regulatory framework

In completing the assessment documented in this decision report, the delegated officer has considered and given due regard to the department's regulatory framework and relevant policy documents which are available at <https://dwer.wa.gov.au/regulatory-documents>.

### 2.2 Application summary and overview of premises

On 24 August 2021, Holcim (Australia) Pty Ltd (the applicant) applied for a works approval under section 54 of the *Environmental Protection Act 1986* (EP Act) to replace their existing concrete batching plant at 12 Cohn Street, Carlisle (the premises). The premises is about 2.7 km south-east of the Town of Victoria Park offices.

The premises relates to *category 77: concrete batching and cement products manufacturing* and assessed 200,000 m<sup>3</sup>/year (480,000 tonnes per year) capacity under Schedule 1 of the Environmental Protection Regulations 1987 which are defined in works approval W6587/2021/1. The infrastructure and equipment relating to the premises category and any associated activities which the delegated officer has considered in line with *Guideline: Risk Assessments* (DWER 2020) are outlined in works approval W6587/2021/1.

#### 2.2.1 Background

A 110,000 m<sup>3</sup>/year capacity concrete batching plant has operated at this site since 1959. The applicant advises this plant has reached the end of its life and a replacement plant is required. The replacement plant will have a design capacity of 200,000 m<sup>3</sup>/year, which is nearly double that of the existing plant.

The premises is situated on the edge of an industrial area between Brigg Street and Cohn Street, in the suburb of Carlisle. Residential premises are located less than 20 m away with only Cohn Street separating them from the premises. The new plant will have additional modern controls for dust and noise to minimise impacts. Additionally, the applicant advises the site layout has been revised whereby heavy vehicles will no longer use Cohn Street to access the premises.

The replacement plant will be located further away from residents compared to the existing plant. The proposal also involves a change to the current operating hours of 6 AM – 6 PM to 4 AM – 6 PM, and an average of three nights per week operating 6 PM – 4 AM. To comply with the night-time assigned noise levels at the closest residences, the applicant proposes to construct an 8.5 m high acoustic barrier behind the main batching plant and mixing area, increasing the existing height of wall on Cohn Street from 4 to 5 metres with a barrier across gateway at 3 m and above and a 4 metre wall between the agitator truck parking area and light vehicle parking area.

The 8.5 m high barrier will be treated with 2.4 m of acoustic absorption material at the top and on both sides. The proposed night-time operations will only occur south of the 8.5 m high barrier wall. A variety of other noise mitigation controls have also been proposed, such as restricting operation of the agitators and limiting heavy vehicle movements during night-time operations.

### 3. Risk assessment

The delegated officer assesses the risks of emissions from prescribed premises and identifies the potential source, pathway and impact to receptors in accordance with the *Guideline: Risk Assessments* (DWER 2020).

To establish a risk event there must be an emission, a receptor which may be exposed to that emission through an identified actual or likely pathway, and a potential adverse effect to the receptor from exposure to that emission.

#### 3.1 Source-pathways and receptors

##### 3.1.1 Emissions and controls

The key emissions and associated actual or likely pathway during premises construction and operation which have been considered in this decision report are detailed in Table 1 below. Table 1 also details the control measures the applicant has proposed to assist in controlling these emissions, where necessary.

**Table 1: Emission, sources, pathways and proposed applicant controls**

Emission	Sources	Potential pathways	Proposed controls
<b>Construction</b>			
Dust	Demolition and removal of old plant and equipment construction and installation of new plant and equipment	Air / windborne pathway	Water down roadways Control speed of vehicles Trucks covered when leaving the premises Water down stockpiles of waste material
Noise		Air / windborne pathway	Construction works to be conducted between 7am and 6pm Monday to Saturday Silencers and noise attenuators on construction equipment Mobile and stationary equipment to have effective exhaust mufflers Restrict use of engine brakes by road trucks Mobile equipment to have low frequency of broadband directional reversing beepers
<b>Operation</b>			
Dust	Delivery of raw materials, batching of concrete, slumping stands and vehicle washdown facility	Air / windborne pathway	Fully enclosed hoppers Raw materials premoistened at quarries and sand pits Tanker cement unloading loading bay roofed and enclosed on two sides Conveyors and transfer points covered Fully enclosed loading bay with dust extraction (agitator trucks) Silos fitted with baghouse and automated cut-off when full and pressure gauge for detection of blockages or leaks All areas for vehicle movement paved Paved areas swept and kept clean of accumulations of dust pr cement Dust monitoring programme comprising quarterly monitoring of dust levels (real time monitoring over a week) for a twelve month period

Emission	Sources	Potential pathways	Proposed controls
Noise		Air / windborne pathway	An 8.5 metre barrier between the mixing plant and Cohn Street with openings on each side for passage of agitators Additional acoustic barriers at rear of truck wash out bays and between the plant and the small vehicle carpark Acoustic barrier side walls varying between 2 m and 8.5 metres Roofing of wash out bays, slumping stand and raw materials delivery lined on the underside with effective acoustic absorber Mufflers for fixed and mobile equipment Only light vehicles to use Cohn Street entry All heavy vehicles to operate to the south of the noise barrier during night-time operations.
Contaminated water run-off		Direct discharge	Equipment and vehicles will be refuelled and maintained off site with the exception of the front-end loader and forklift which will be refuelled on site Spill response equipment available and readily accessible Separate runoff from potentially contaminated catchment from the remainder of the site
Light overspill	Night-time operations	Direct illumination	Use of lighting that will not spill over, or affect, nearby sensitive receptors

## 3.2 Modelling

### 3.2.1 Air quality modelling

#### Air dispersion model

The applicant engaged consultant Ramboll to undertake air dispersion modelling for the proposal (Ramboll 2020). The AERMOD air dispersion model was used to predict deposition rates and ambient concentrations of total suspended particulate (TSP) and ambient concentrations of PM<sub>10</sub> and PM<sub>2.5</sub> across the modelled domain and at sensitive receptor locations nearest to the premises (residential area).

#### Results

Table 2 shows the maximum predicted concentrations for particulate matter, including background at the nearest sensitive receptors.

**Table 2: Maximum predicted concentrations and deposition at the boundary of the residential area**

Pollutant	Averaging Period	Units	Guideline	Predicted Concentration + Background	% of Guideline
PM <sub>10</sub>	24 hr	µg/m <sup>3</sup>	50	32	64%
	Annual	µg/m <sup>3</sup>	25	19	77%
PM <sub>2.5</sub>	24 hr	µg/m <sup>3</sup>	25	8	34%

Pollutant	Averaging Period	Units	Guideline	Predicted Concentration + Background	% of Guideline
PM <sub>2.5</sub>	Annual	µg/m <sup>3</sup>	8	5	67%
Dust deposition	Annual	g/m <sup>2</sup> /month	2	0.2	11%

The model predicts the pollutant concentrations and dust deposition levels will remain well below the relevant standard criteria. The highest predicted percentage of the guideline was 18% of the current (2021) National Environment Protection Measure (NEPM) standard for PM<sub>10</sub> (24-hour average), with a maximum predicted concentration at the boundary of the residential area of 8.9 µg/m<sup>3</sup>.

The maximum total deposited dust level was predicted to be 0.2 g/m<sup>2</sup>/month at the nearest residential location.

### DWER technical review

DWER's review of the air dispersion modelling (Ramboll 2020) identified that:

- the model inputs appear to be consistent with the requirements of the Air Quality Modelling Guidance Notes (DoE 2006), however worst-case emissions do not appear to have been assessed and the maximum modelled concentrations outside of the premises boundary have not been provided;
- the emissions estimates were derived from values published in the NPI emissions estimation technique manual for concrete batching and concrete product manufacture, which is generally considered appropriate, however there is significant uncertainty in fugitive particulate emissions estimation techniques as emission factors for particles are highly generalized and usually expressed in kilograms of dust emitted per tonne of material handled, which are then estimated for the annual total operations and averaged over hours of operation. Consequently, peak short-term emissions, which can be major drivers of off-site impacts, tend to be smoothed out and reduce the reliability of the results;
- there appears to be a 20-fold difference between some of the controlled and uncontrolled emissions factors used in the model, which has not considered worst case emissions, i.e., where emissions controls have failed or are not as effective as expected;
- the modelled results are presented as 24-hour and annual average concentrations, which are relevant to the protection of long-term public health, but do not represent perceptions of short-term and/or visible dust plumes; and
- given the proximity of sensitive receptors, particulate monitoring is suggested to assess the effectiveness of the implemented dust management measures. It is also recommended the applicant implement a complaints investigation and management system.

## 3.2.2 Noise modelling

### Noise model

The applicant engaged consultant Herring Storer Acoustics to undertake an environmental noise impact assessment (Herring Storer 2021). The noise modelling software *SoundPLAN* was used to predict noise levels at nearby receptors under worst case operating conditions. Two scenarios were modelled: one for daytime operations and one for night-time operations. Herring Storer also measured baseline noise levels to provide additional context.

### Results

The model predicts full compliance with the Noise Regulations can be achieved for both day and night-time operations with the incorporation of acoustic mitigation measures, in the form of

acoustic barriers/roofing and the cessation of specific equipment (e.g., agitators) and restricting heavy vehicle operations during the night-time period.

The model predicts the highest noise levels at the nearest sensitive receptors to range from 31 to 36 dB during the night-time period and from 36 to 41 dB during the daytime, which complies with the assigned levels determined for those receptors after applying an influencing factor and other adjustments in accordance with the Noise Regulations.

Measured baseline noise levels indicate that typical background noise levels range between  $L_{A90}$  47 and 53 dB in the general area, even without Holcim operating the batching plant. Herring Storer consider the high background noise levels indicate that operational noise at the premises may be masked by the background, with the design level of 39 dB for night operations is significantly less than the  $L_{A90}$  baseline noise of 47 dB.

#### DWER technical review

The department has reviewed the Herring Storer (2021) report and identified that:

- the assessment methodology and results present reasonable and reliable conclusions on the predicted noise levels under worst case meteorological conditions;
- the influencing factors and  $L_{A10}$  assigned noise levels calculated for each of the selected noise sensitive receivers are correct;
- noise emissions from the proposal can be managed to comply with the Noise Regulations with the proposed noise mitigation walls and roofing incorporated and restricted night-time operations; and
- the high levels of background noise measured by Herring Storer were likely exacerbated by noise generated from nearby residential air conditioners and evaporative coolers given the time of year (Dec/Jan) and extractive fans from nearby industrial premises. Background noise levels may be very different in other seasons, which may not be sufficient for masking noise characteristics from Holcim operations and may cause impacts to Cohn Street residences during the proposed night-time operations.

### 3.3 Receptors

In accordance with the *Guideline: Risk Assessment* (DWER 2020), the delegated officer has excluded the applicant's employees, visitors, and contractors from its assessment. Protection of these parties often involves different exposure risks and prevention strategies and is provided for under other state legislation.

Table 3 below provides a summary of potential human and environmental receptors that may be impacted as a result of activities upon or emission and discharges from the premises (*Guideline: Environmental Siting* (DWER 2020)).

**Table 3: Sensitive human and environmental receptors and distance from the premises**

Human receptors	Distance from the premises
Residential premises	18 metres from the boundary of the premises
Environmental receptors	Distance from the Premises
Groundwater	6 metres below ground level (Perth groundwater Atlas)

### 3.4 Risk ratings

Risk ratings have been assessed in accordance with the *Guideline: Risk Assessments* (DWER 2020) for each identified emission source and takes into account potential source-pathway and receptor linkages as identified in Section 3.1. Where linkages are in-complete they have not been considered further in the risk assessment.

Where the applicant has proposed mitigation measures/controls (as detailed in Section 3.1),

these have been considered when determining the final risk rating. Where the delegated officer considers the applicant's proposed controls to be critical to maintaining an acceptable level of risk, these will be incorporated into the works approval as regulatory controls.

Additional regulatory controls may be imposed where the applicant's controls are not deemed sufficient. Where this is the case the need for additional controls will be documented and justified in Table 4.

Works approval W6587/2021/1 that accompanies this decision report authorises construction. The conditions in the issued works approval, as outlined in Table 4 have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

The premises will continue to operate under the existing registration.

**Table 4: Risk assessment of potential emissions and discharges from the premises during construction, commissioning and operation**

Risk events					Risk rating <sup>1</sup> C = consequence L = likelihood	Applicant controls sufficient?	Conditions <sup>2</sup> of works approval	Justification for additional regulatory controls
Sources / activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls				
<b>Construction</b>								
Demolition and removal of old plant and equipment construction and installation of new plant and equipment	Dust	Air/windborne pathway causing impacts to health and amenity	Residences 18 metres north-west of Premises	Refer to Section 3.1	C = Minor L = Rare <b>Low Risk</b>	Y	Condition 1	N/A
	Noise			Refer to Section 3.1	C = Minor L = Rare <b>Low Risk</b>	Y	Condition 1	N/A
<b>Commissioning</b>								
Commissioning concrete batching facility	Dust	Air / windborne pathway causing impacts to health and amenity	Residences 18 metres north-west of Premises	Refer to Section 3.1	C = Moderate L = Unlikely <b>Medium Risk</b>	Y	Condition 1 <b>Conditions 4 – 16</b>	See sections 3.5 and 3.6
	Noise							
<b>Operation</b>								
Delivery of raw materials, batching of concrete, slumping stands	Dust	Air/windborne pathway causing impacts to health and amenity	Residences 18 metres north-west of Premises	Refer to Section 3.1	C = Moderate L = Possible <b>Medium Risk</b>	Y	Condition 1	Condition 1 of the works approval will impose infrastructure controls to ensure compliance with the Environmental Protection (Concrete Batching) Regulations 1997 during ongoing operations. See sections 3.5 and 3.6.
	Noise	Air / windborne pathway causing impacts to health and amenity	Residences 18 metres north-west of Premises	Refer to Section 3.1	C = Moderate L = Possible <b>Medium Risk</b>	Y	Condition 1	
	Sediment laden stormwater	Direct discharge to street or council drains	Stormwater infrastructure	Refer to Section 3.1	C = Minor L = Unlikely <b>Medium Risk</b>	Y	Condition 1	
	Washout facility and wastewater management system					Y	Condition 1	

Note 1: Consequence ratings, likelihood ratings and risk descriptions are detailed in the *Guideline: Risk Assessments* (DWER 2020).

Note 2: Proposed applicant controls are depicted by standard text. **Bold and underline text** depicts additional regulatory controls imposed by department.



## **3.5 Risk assessment for dust**

### **3.5.1 Dust emissions**

Dust may be generated when raw materials (aggregates and sand) are transferred from the delivery trucks to the material bins, or when cement is transferred from the cement tanker to the cement silos. Further, fugitive dust emissions may occur during storage.

Dust can be carried by the wind, uplifted by wind gusts and vehicle movements. Dust can potentially impact on the amenity or health of nearby sensitive receptors (about 18 m from the premises).

Exposure to dust can cause irritation, visibility issues, and deposition on neighbouring infrastructure causing amenity impacts.

### **3.5.2 Criteria for assessment**

The Australian National Environmental Protection Council has developed national ambient air quality standards as per National Environmental Protection Measures (NEPM) for ambient air quality. The NEPM includes standards for six key air pollutants to which most Australians potentially are exposed. The six pollutants described in the NEPM are carbon monoxide, ozone, sulfur dioxide, nitrogen dioxide, lead and particulate matter.

Accordingly, NEPM standards are applicable to assess/determine air quality within the subject area in reference to dust/particulate matter. The NEPM standard for ambient particles as PM<sub>10</sub> is 50 µg/m<sup>3</sup> over one day averaging period and an annual average of 25 µg/m<sup>3</sup>. The PM<sub>2.5</sub> standard is 25 µg/m<sup>3</sup> for 24 hours and 8 µg/m<sup>3</sup> for an annual average.

### **3.5.3 Assessment**

The department's air modelling guidance notes (DoE 2006) require modelling of upset emissions, which is typically done by running the upset emissions against one year of meteorology to provide a highly conservative estimate of maximum impacts. As noted above, there is uncertainty around the air dispersion modelling presented, particularly as failures of some of the proposed controls may result in emissions up to 20 times greater than the controlled.

Given the proximity of sensitive receptors, dust control at the premises is critical and must be managed and mitigated to minimise unacceptable off-site impacts. As such, the proposed controls for dust as listed in Table 1 will be imposed on the works approval. Validation of dust levels at the premises boundary during commissioning will also be imposed on the works approval, to provide assurance over the effectiveness of the proposed dust controls and to ensure the protection of human health for nearby receptors from ongoing operations.

The delegated officer notes that dust monitoring on the boundary is a requirement of the development approval for the project for ongoing operations. Should dust control become a problem during ongoing operations, the delegated officer may consider it appropriate to replace the existing registration with a licence to regulate activities on the premises.

## **3.6 Risk assessment for noise**

### **3.6.1 Noise emissions**

Noise emissions will occur through delivery of raw materials, batching and loading of agitator trucks, slumping and washout. Exposure to noise can significantly impact amenity.

### **3.6.2 Criteria for assessment**

The Environmental Protection (Noise) Regulations 1997 set the prescribed standards for noise emissions in Western Australia. Assigned noise levels are determined at the premises receiving the noise and are subject to influencing factors such as the proportion of industrial

and residential premises within a circle around the receptor.

### 3.6.3 Assessment

The delegated officer notes the hours of operation for the new plant are proposed to be significantly expanded to include earlier morning start times and 24-hour operations on some days, therefore noise management will be critical for ensuring operations can be acceptable.

The noise modelling provided (Herring Storer 2021) indicates that without adequate noise controls in place, predicted noise levels are unlikely to comply with the night-time assigned levels at nearby noise sensitive receptors. The applicant has therefore proposed to implement significant noise mitigation measures, including constructing an 8.5 m high barrier wall between the plant and Cohn Street residences, in addition to restricting operation of specific equipment and limiting heavy vehicle movements.

With the above controls in place, Herring Storer (2021) predicts full compliance with the Noise Regulations can be achieved at all nearby noise sensitive premises during worst case operating conditions.

The delegated officer considers that full compliance with the Noise Regulations can be achieved if the proposed controls are properly designed and implemented. As the proposed controls are critical for ensuring an acceptable level of risk, they will be imposed on the works approval as infrastructure design requirements.

## 4. Consultation

**Table 5: Consultation**

Consultation method	Comments received	Delegated officer's response
<p>Application advertised on the department's website on 15 September 2021</p>	<p>Two submissions received:</p> <ul style="list-style-type: none"> <li>• Cement factories/plants do not belong adjacent to residential areas</li> <li>• Noise and dust issues with existing plant have not been addressed</li> <li>• Stormwater carried sediment off the site in July 2021</li> <li>• Plans do not correspond with what was agreed on by SAT</li> <li>• Applicant's community consultation has obfuscated the approval process</li> <li>• Local government consultation has been lacklustre considering that the business adjoins a residential area with proposed increase in density.</li> <li>• There is no clear timetable for works and no traffic management plan for construction included in the application, it is not clear how the redevelopment will impact family life and the ability to work from home for residents.</li> </ul>	<p>Planning and incompatible land uses, local government consultation and traffic management are matters for local government to address through its local planning laws.</p> <p>The department will assess the application on its merits in accordance with its regulatory framework and consider the risk of impacts to sensitive receptors and whether the assessed risk is acceptable.</p> <p>The delegated officer expects that noise, dust and stormwater management will improve under the proposed equipment for the new plant.</p>

Consultation method	Comments received	Delegated officer's response
Local Government Authority advised of proposal on 15 September 2021	The Town of Victoria Park noted that the plan included the removal of three trees which were required to be left as part of the JDAP approval.	Retention of trees is not within the scope of this assessment. However, a final determination on the application will not be made unless the applicant can demonstrate that all relevant planning approvals have been granted.
The applicant was provided with a draft decision document and works approval on 3 December 2021	<p>Comments were received on 16 December 2021: Decision Report:</p> <ul style="list-style-type: none"> <li>• requested change for description of the cement tanker unloading bay and dust monitoring plan;</li> <li>• notes that Ramboll did not model worst case as unlike other industries, upset conditions, are not necessary for the on-going operation of the plant;</li> <li>• notes that standard is a 24 hour standard – if the situation is rectified in a timely manner it is unlikely that a short term event will result in exceedance;</li> <li>• notes that there is no guideline for amenity or health smaller than 24 hours so cannot comment on short term concentrations;</li> <li>• request wording change on the grounds that Herring Storer did model for the gaps in the noise wall;</li> <li>• makes further commitment to install roller doors on the gaps which will be closed during night operations to further reduce noise emissions; and,</li> <li>• notes that acoustic assessment is not reliant on masking.</li> </ul> <p>Works approval</p> <ul style="list-style-type: none"> <li>• Request the requirement for roofing aggregate dump bins in condition 1 be removed because noise modelling did not include roofing and predicted noise levels were compliant with regulations.</li> <li>• Request change to wording of description of cement tanker unloading bay</li> <li>• The applicant indicated a location for N1 and AQ1 in western carpark.</li> </ul>	<p>The delegated officer accepts the wording changes requested for the proposed applicant controls.</p> <p>The delegated officer notes the applicant's comments on worst case scenarios and particulate standards being 24 hour averages. Short term dust emissions still have the potential for significant impacts on amenity either by direct impact on people or deposition on property. It is expected that activities causing a dust emission will cease immediately until the situation is rectified.</p> <p>The delegated officer accepts the wording change in the noise assessment and is supportive of the undertaking to install roller doors. The text of the works approval has been altered accordingly.</p> <p>The delegated officer notes the comment on masking.</p> <p>The delegated officer notes this area was marked as potentially roofed in application and accepts the change, however notes that noise levels are predicted to only marginally comply with the noise regulations and actual levels are yet to be verified.</p> <p>The delegated officer notes that the sampling locations are expected to comply with AS3580.1.1 <i>Methods for sampling an analysis of ambient air – guide to siting air monitoring equipment</i> and minimum siting</p>

Consultation method	Comments received	Delegated officer's response
		<p>requirements set out in Part 3 of the Noise Regulations (as applicable).</p> <p>The licence has not been amended to specify a particular location in the western car park.</p>

## 5. Decision

The delegated officer has determined the proposal to replace the existing concrete batching plant at the premises, with an assessed design capacity of 200,000 m<sup>3</sup> per year, poses a tolerable level of risk of impacts to public health and the environment, subject to multiple regulatory controls, such as specifying minimum infrastructure design requirements. This determination is based on the following:

- the proposal involves doubling the design capacity of the existing plant, and expanding operations beyond normal day-time working hours, i.e., evening and night-time operations;
- the location of the premises being on the edge of an industrial area that is adjacent to a residential area, with the closest residences about 18 m from the premises boundary;
- compliance with the Noise Regulations during evening and night-time operations are heavily reliant on proposed noise mitigation measures, including construction of a series of noise barriers between specified areas on the site and Cohn Street residences and restriction of other activities during night-time operations; and
- compliance with relevant air quality standards (2021 NEPM) at the nearest receptors for particulates during upset conditions is unclear, with the risk of unacceptable impacts requiring validation monitoring at the premises boundary and implementation of a dust complaints investigation and management system.

To minimise the potential for impacts to public health and the environment, the applicant has proposed the following engineering controls, which will be imposed on the works approval as they are considered critical for maintaining an acceptable level of risk:

- noise mitigation infrastructure must be installed to ensure compliance with the Noise Regulations during operations, including a combination of 8.5 m, 6 m and 4 m high acoustic barriers and other acoustic shielding on specified equipment and roofed areas, in addition to engineering changes, layout changes and operational/administrative changes; and
- dust mitigation controls must be installed on specified infrastructure to ensure dust emissions are contained within the premises and do not impact on off-site receptors, including a reverse pulse air cleaning system (baghouse filter) on cement silos and associated ducting for minimising emission during cleaning, and water sprays installed on aggregate storage areas.

In addition, the following validation monitoring and reporting is required, to provide assurance over the effectiveness of the above engineering controls:

- noise levels will be monitored during commissioning to ensure compliance with the Noise Regulations; and
- dust levels will be monitored from the baghouse filter on the cement silos, and on the premises boundary, during commissioning, to ensure particulate levels are acceptable.

Given the existing site does not meet the recommended separation distance to sensitive receptors and there being a heightened level of community interest in the proposed expansion works, it is likely to be challenging for the applicant to conduct the proposed expanded

operations without causing some level of impact to local amenity, particularly in the evening and at night. The delegated officer therefore considers that validation monitoring will be critical for validating that noise and dust levels are as predicted, and that ongoing operations can be acceptable. Should the levels exceed that as predicted and there is demonstrable evidence of off-site impacts, the delegated officer reserves the right to consider the option of regulating the premises through a licence, that would replace the existing registration.

#### Works approval and registration

Works Approval W6587/2021/1 that accompanies this report authorises construction and commissioning only. The conditions in the issued works approval, as outlined in the above risk table have been determined in accordance with the *Guideline: Setting Conditions* (DWER 2020b).

Following construction, the applicant must submit an environmental compliance report that certifies all infrastructure has been installed in accordance with the works approval, prior to commencing environmental commissioning works. Following commissioning, the applicant must submit an environmental commissioning report to demonstrate that noise and dust levels are as expected. If it can be demonstrated the new plant has been satisfactorily constructed and can operate with acceptable emissions, ongoing operations can continue under existing registration R277/1970/1.

## 6. Conclusion

Based on this assessment, it has been determined the issued works approval will be granted subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

**Daniel Hartnup**  
**A/MANAGER, PROCESS INDUSTRIES**  
**REGULATORY SERVICES**

*Delegated officer*  
*under section 20 of the Environmental Protection Act 1986*

## References

1. Department of Environment Regulation (DER) 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
2. Department of Water and Environmental Regulation (DWER) 2020, *Guideline: Environmental Siting*, Perth, Western Australia.
3. DWER 2020, *Guideline: Risk Assessments*, Perth, Western Australia.
4. GHD 2021, *Holcim Welshpool Concrete Upgrade Works Approval Application Supporting Document*, Perth Western Australia.
5. Ramboll 2020, *Welshpool Concrete Batching Plant Air Quality Modelling Holcim Australia*, Perth Western Australia.
6. Herring Storer Acoustics 2021 *Acoustic Assessment Holcim Welshpool Redevelopment Briggs Street Perth Western Australia*.